2.13 Project Accounting

2.13.1 Objective

The Project Systems module will be used by the State to aid project managers in defining goals and activities in order to carry out a project in its entirety. The State engineers and financial managers will utilize Project Systems to better facilitate and manage their projects. The State currently uses SPIRS (Statewide Permanent Improvement Reporting System) as the centralized project system for tracking costs, monitoring approvals, and generating financial activity reports. Project Systems can enhance the current functionality of SPRIS and can provide additional project management tools that may not be available through SPIRS. For each agency and ultimately for the statewide system, a decision must be reached as to how the existing legacy system will interact or be replaced by the SCEIS solution. While SPIRS is a statewide system for monitoring and tracking project activities, the information contained in SPIRS spans across many organizations not currently processed in STARS and will not be processed in the SCEIS solution. Therefore the decision on how SPIRS is or is not used going-forward needs to be taken into consideration regarding the impact and processing of non-SCEIS related data. Therefore, a short-term and long-term solution is proposed.

For the short-term, it is important that the information and processes in place within SPIRS are not disrupted. Financial activity currently interfaced from STARS will be replaced with an interface of financial activity from the SCEIS solution. For the long-term, once most or all agencies have implemented the SCEIS solution, the State should re-examine the requirements for the full replacement of SPIRS. It is anticipated that most or all of the current functionality of SPIRS can be replaced through a combination of the Budget Preparation System (budget requests for new projects), Project Systems (monitoring and controlling project activities), Business Warehouse (loading data from non-SCEIS organizations for consolidation), and Workflow (managing project requests and changes to projects). However, without the budget preparation functionality, replacement of SPIRS is not recommended.

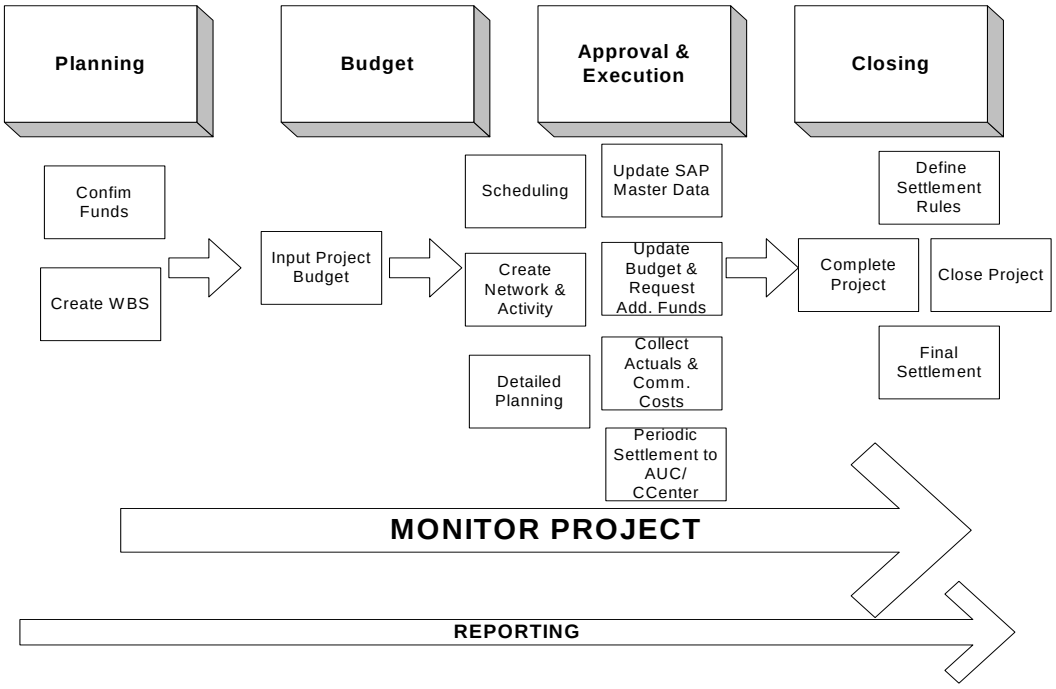
During the short-term, the procedures for capital project approval and processing will remain the same as today. All Part I and Part II forms currently in use will continue unchanged. This process will be outside of the SCEIS solution.

The diagram below depicts a project's lifecycle within Project Systems starting from the planning phase and ending in the closing phase. For the State, the flow assumes the project has already passed through the appropriate approvals. It provides cross-functional capabilities, allowing both the state engineers and financial accountants to manage and report on projects at any given time.

Currently, the State does not apply overhead charges to project activities; however, functionality exists within the cost accounting area to allow for allocations to projects. Overhead is allocated to a project using a costing sheet and overhead rate. The cost element, fund, functional area, and cost center (for the credit side of the posting) are specified in the allocation. The overhead is then calculated and posted to the project structure, and the credit side is posted to the cost center.

Project Systems includes functionality to support budgetary controls separate from the legal basis budget. Within the controls, tolerance levels are identified to indicate what type of messaging occurs. The tolerance levels for projects have not been defined; however, they are typically set at 90% for generating warning messages and 100% for absolute control.

Exhibit 0-1 Project Lifecycle



2.13.2 Process Definition

A standard project may consist of engineering, construction, and design for a building. Projects are created in order to track and monitor the cost and progress of a particular job. The levels of the project (further discussed ahead) include the following:

- Project definition
- WBS (Work Breakdown Structure) level 1 and 2 elements
- Networks
- Activities
- Milestones

Master Data

One of the first steps in creating a project is to break down the work into tasks and build a hierarchy. Depending on the type, complexity, and criteria of the project, the tasks may vary. In Project Systems, the binding framework for all organizational elements created within a project is determined by the project definition. A project definition is automatically created as soon as the work breakdown structure (WBS) is created. A WBS is a structural element representing the hierarchical organization of a project, and describes a task or a partial task that can be divided into lower levels. Essential functions of the work breakdown structure include the following:

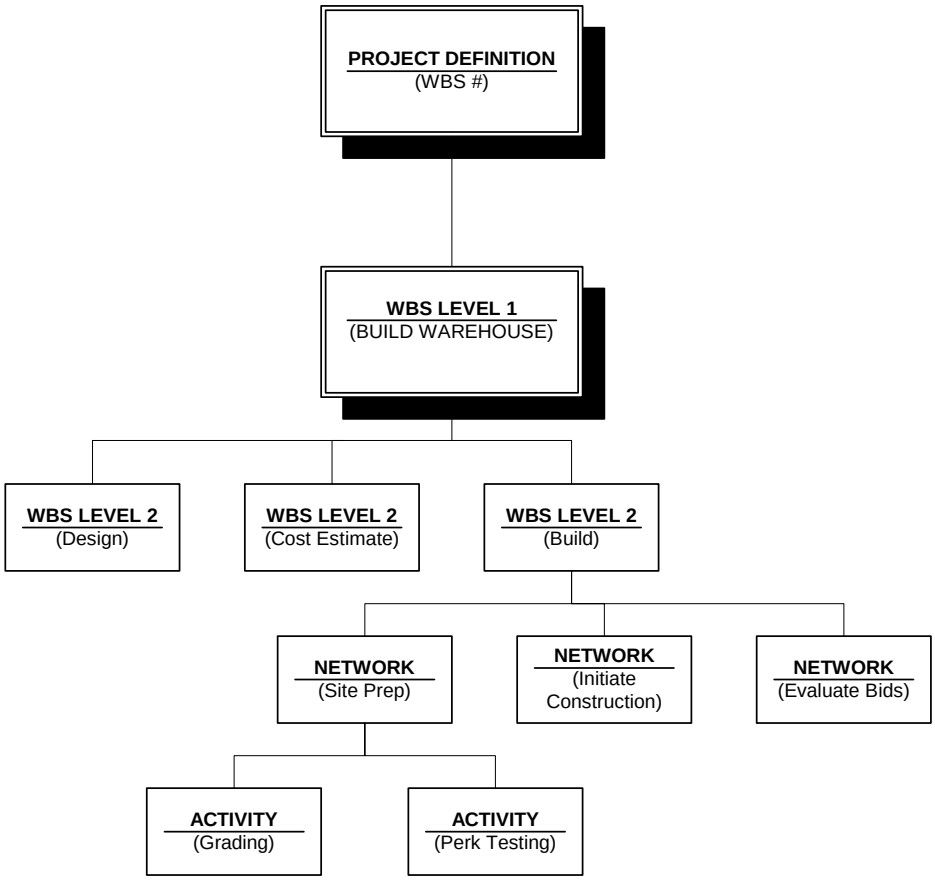
- Dates: basic dates, scheduled dates, and actual dates
- Budget: original budget, budget updates, released budgets, and availability control
- Commitments: purchase requisition and purchase orders
- Periodic processing: overheads, interest, and settlement
- Payment data: planning of payments and posting actual data
- Costs and revenues: planned costs/revenues and actual costs/revenues

The project hierarchy could be as simple as one level WBS element to a project or many WBS elements to a project. However, the minimum requirement to create a project is to have one WBS element to a project.

The diagram below is an example of a potential State capital project, using the hierarchical structure of Project Systems. The project definition is at the top of the structure and defines the

start and end dates of the project. The WBS level 1 structure beneath the project definition is "build warehouse" which then branches out to the WBS level 2 elements: "design," "cost estimate," and "build." In this particular example, the WBS level 2 element "build" is further branched out to networks. These networks are "site prep," "initiate construction," and "evaluate bids." Each network can also be further branched out to an even lower level of detail referred to as activities. Activities in the example below are "grading" and "perk testing."

Exhibit 2.13.2-1 Sample Project/WBS/Network/Activity Relationship



The following are the key elements in defining and creating master data for a project in Project Systems:

Project Definition – The binding framework, which contains data that affects the entire project such as the start and finish dates, organizational data, and planning parameters. In addition, the project definition defines the company code, business area, and cost center for each WBS element.

WBS Structure – The WBS structure breaks work down in the project into individual tasks and elements in a hierarchical structure. They usually reflect responsibility-oriented structures and include elements such as WBS dates, budget, periodic processing, funding data, and costs. The project budget and TiD (Treasurer's id for bonded debt related to a project), in particular, is included in the WBS structure.

WBS element – A WBS element describes either a certain task or a partial task that can be subdivided even further. Business Areas, resources and cost centers are assigned to WBS elements for a particular project. Additionally, the State can specify in the system that an email be sent to the person responsible for the project if the budget associated with a particular task is exceeded.

Network – Networks represent the process-oriented structure of the project and focuses on quantity structure for describing, planning, controlling, analyzing costs, scheduling dates, resources, and material requirements. A network usually consists of a header, one or more activities and their relationships. There is an emphasis on activity dates, required resources and resource costs. They are primarily objects containing instructions on how to perform tasks in a specific way, in a specific order, and in a specific time period. Additionally, networks and activities that have a time based plan require data to be entered in the system, which confirms (records) how much of the activity is completed. This information allows the system to report on the percentage of completion.

Activity – Activities are components within a network where project expenses can be charged. Scheduling can be performed based on activities and their relationships and each activity can be assigned to a work breakdown structure element. Additionally, planning can be performed at this level.

Milestone – A milestone is defined as an event that is of particular importance and relevance to a project and is vital for the progress of the project. Though there are no pre-defined common templates of milestones in Project Systems, it is very simple to create them. A set of milestones can be created that would be used for construction management. For example, they would be created, named, and then added to any project as a milestone group for any WBS.

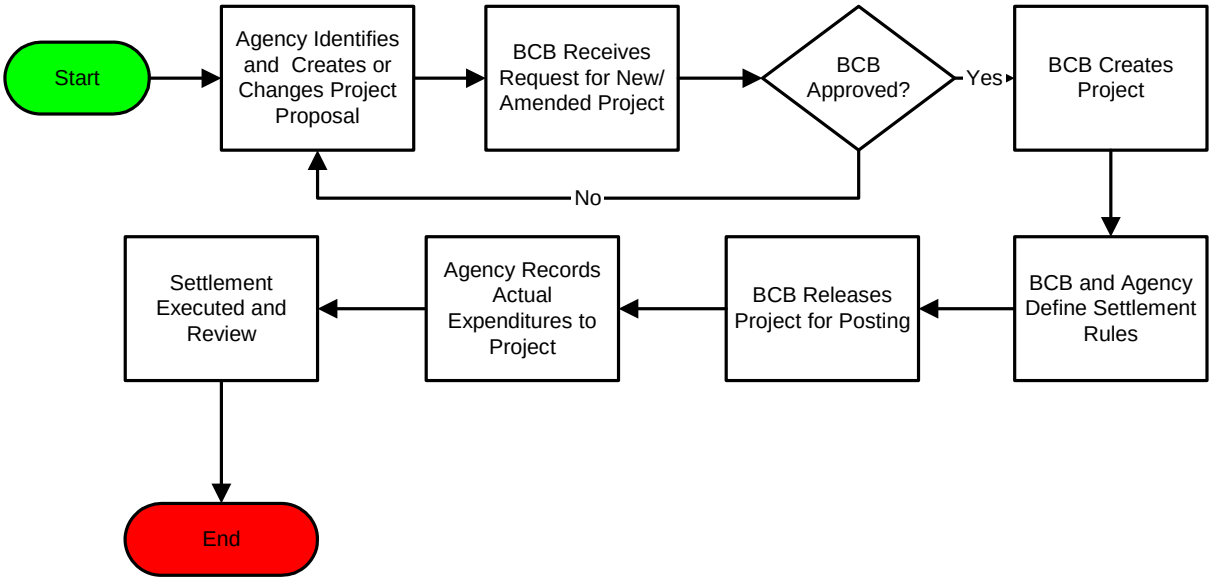
Exhibit 2.13.2-2 Crosswalk of SCEIS to STARS

SCEIS Master Data	SPIRS Crosswalk	STARS Crosswalk
Project Definition	Project Number/Project ID	Project Number/Project ID
WBS Structure	Project Name (construction building), TiD information	Project Name (construction building)
WBS element	--	--
Network	--	Project Phase
Activity	--	--
Milestone	--	--

Process Flows

1. Creating a WBS: The process flow below describes a high level process of creating a work breakdown structure. Typically, a project manager will receive a request for a new project and will then create the project. The project manager will then create the work breakdown structure. Once the WBS is created, the financial accountant will then create the settlement rules, followed by releasing the project. Releasing a project indicates that the project is ready to be charged and settlement rules are in the correct place with the appropriate costs allocated. Once it has been released, the financial accountant will then post actual expenditures followed by performing the actual settlement. Under the short-term strategy, the initial steps as exhibited below are external to the SCEIS solution. However, the long-term solution may include these initial steps as part of the SCEIS solution as an automated internal process.

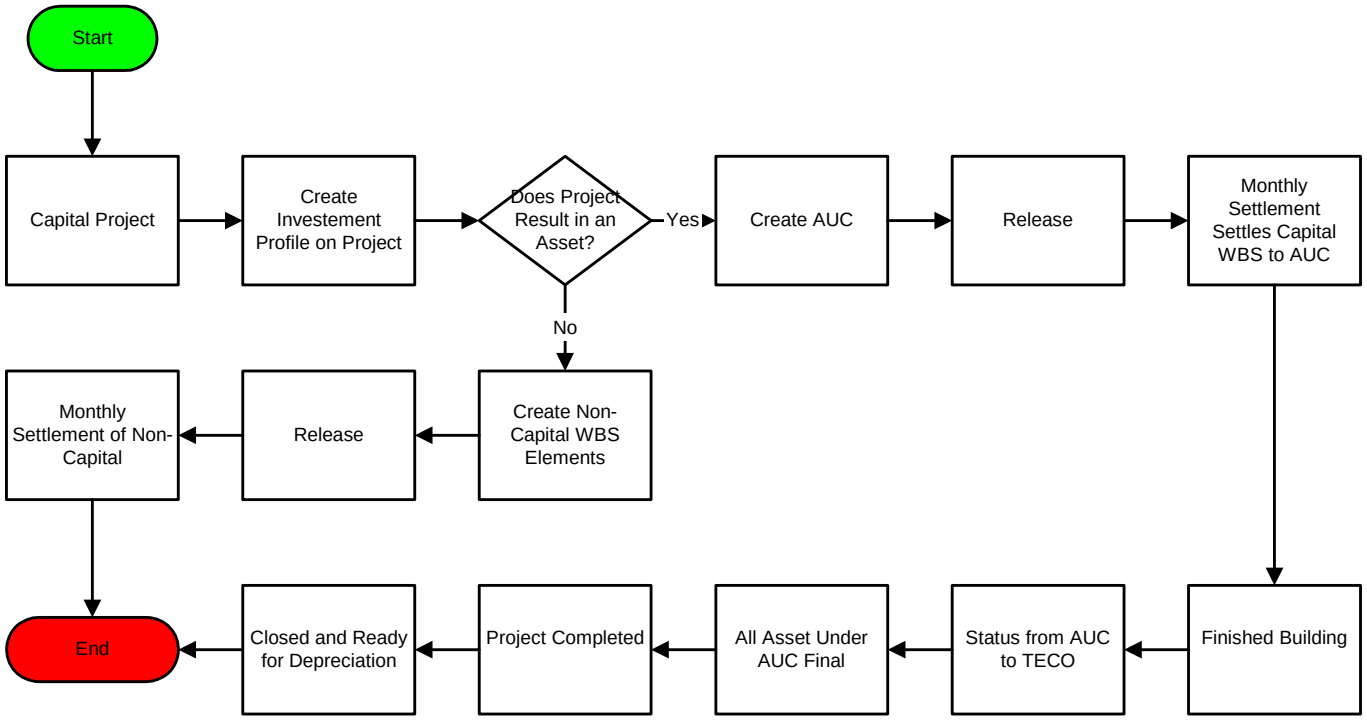
Exhibit 2.13.2-3 Project Master Data Creation Process



2. Creating an AUC: Asset under construction (AUC) is the link between projects and the assets acquired during the project known as an asset under construction. Settlements move costs from the WBS to the AUC each period, monthly. Once the asset is completed, the WBS is changed to indicate completion (TECO-Technically Complete) and moves costs from AUC to a final asset where depreciation starts. Here the State has the option to either move all or only a portion of costs from AUC to final asset. The process flow below defines the State's business processes on how to create an asset under construction for capital projects. The project manager creates the investment profile and project and then determines whether it is a capital project or not. If it is a capital project, then an asset under construction is created. Once it is created, the financial accountant then releases it. When an asset under construction is released, charges can be posted and settlement rules are confirmed. Settlement is a way to move costs on a periodic basis from a WBS to some other receiver or from one CO object to another. The settlement rules will be pre-defined by the agencies and maintained centrally. Once the AUC has been released, the financial accountant settles the capital WBS to an AUC. The building, in this example, is then finished and the status changes from Asset under Construction to TECO. The Asset is then considered a final asset and is ready for depreciation. Assets, which are capitalized, will have an asset master record. Refer to the Assets section for additional information on asset master records. This marks the completion of a capital project.

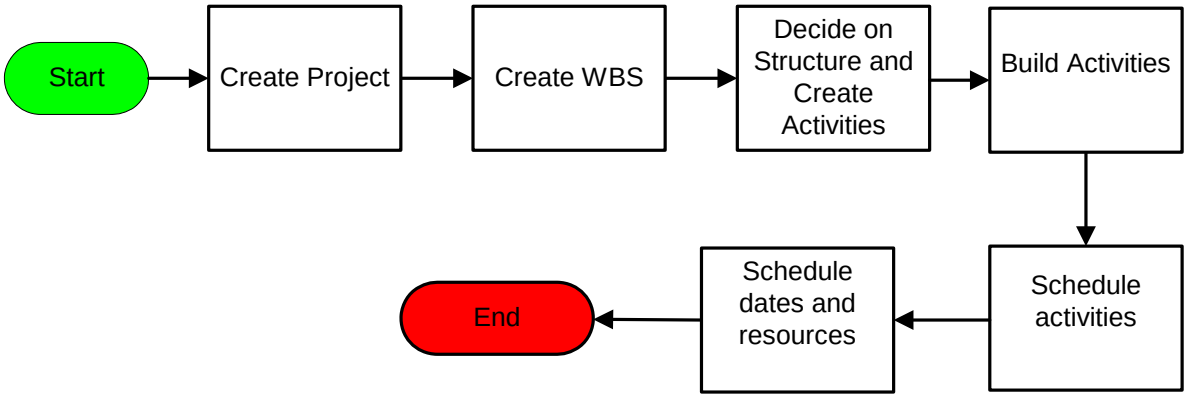
However, if the project is not a capital project, the project manager creates a non-capital WBS element and then releases it. Once it is released, the financial accountant settles the non-capital WBS to another expense receiver.

Exhibit 2.13.2-4 Assets Under Construction Creation Process



3. Creating a schedule: The project manager is responsible for creating the project schedule. From a high level perspective, the project manager creates a project and then creates a WBS. The manager then decides on the structure of the project and whether or not activities will be used. If activities are part of the schedule, the project manager will build them and schedule them accordingly. The project manager then schedules the dates and resources that correspond to those activities.

Exhibit 2.13.2-5 Project Activities Schedule



Integration

The State will control the legal base budget in the Funds Management module. The Funds Management module includes 6 dimensions that are either derived or input on the specific transactions. Refer to the Funds Management section of this document for specific details on the dimensions. One of the dimensions includes the element funded program. Funded program can be derived from the project number. While project budgets focus on the specific project and the activities within the project, Funds Management focuses on the budgetary control and funding of a project through the funded program. This allows both the project budget and the funds management budget to accommodate multi-year budget execution. Available balances within Funds Management are then available to carry forward to the subsequent fiscal year. Cash balances for multi-year projects will be reflected in the general ledger.

Benefits

Project systems functionality will not only benefit the individual agencies, but also the central operations of the State. Various benefits were identified throughout the workshops and include the following:

- Fully integrated project management system
- Can be used for both large scale and small-scale projects throughout the State based on project management needs
- Better fit for complex State initiatives

- Robust functionality provides greater level of detail than utilizing SCEIS solution internal orders
- Offers the capability of tracking activities with interdependencies
- Offers the capability to integrate with MS Project
- Ability to both capitalize and not capitalize projects
- Advanced project management functionality and sophisticated planning tool

Business Requirements

The following set of business requirements represent items that were discussed during the Business Blueprint workshops that can be classified in one of the following categories: 1)A new requirement (i.e. not identified in the original RFP); 2)A previous requirement that responding to a solution that has changed significantly (i.e. grants); or 3)A previous requirement that should be reviewed carefully with the solution as it may not fall in line with the solution best practice. Please refer to the appendix of this document for the RFP requirements.

The State requires the ability to identify capital improvement bonds and tracking the TiD information to a project (Treasurer's id for Bonded debt related to a project). Project Systems has user-defined fields that can be utilized to capture this information.. There will be a designated field that will capture the TiD in the project master data.

Changes in project requirements greater than $25,000 require the approval of MMO (Materials Management Organization). Changes to contractual amounts will be supported through the procurement cycle. Refer to the Procurement section for additional information on this specific policy.

Ability to report on anticipated funding needs and timing of draws. This can be accommodated through a custom report within Project Systems.

Upon settlement of the project costs, revenues associated with the project activities may not be appropriate for "netting". The establishment of the settlement rules will require the revenues be settled prior to the settlement of the costs or minimally settled to separate cost objects.

Most projects require a retainage amount to be withheld on each milestone or project payment. Retainage can be managed either based on the payment terms of the original contract or procurement document or using special general ledger indicators to reclassify the portion of the

retainage as a separate liability account for financial reporting purposes. The options available will be reviewed with the project team for accurately reflecting the liabilities within the general ledger.

Reporting

During the Business Blueprint workshops, the following reporting needs were identified for project-based activities:

Exhibit 2.13.2-6 Project Systems Reporting Needs

Report Name	Description	Standard Report/InfoCube
Capital Reports tracking over multiple years	Capital reports showing a listing of all projects and tracking them over multiple years. Capital reports can be seen with an overall project report and are used to show costs from a large group of projects.	Standard Report – Summarization Report
Reporting by project, fiscal year, fund, status of encumbrances, cash balances, and cash drawn	These reporting requirements are both managerial and financial and require BW reports, which include PS master data, CO actual costs, and FM budgeting information.	Infocube – Controlling
Approved budget balance and expenditures by categories	This reporting requirement will show budgetary balances and expenditures by categories and will require infocubes including PS master data, CO actual costs, and FM budgeting information.	Infocube – Controlling
Actual versus Budgetary Cost Reports	This reporting requirement will show actual versus budgetary cost reports and require infocubes including PS master data, CO actual costs and FM budgeting information.	Infocube – Controlling
Project Cost Element Reports	These reports show all postings on a project by WBS element. Unlike the hierarchy reports these reports show all cost movement whether by settlement, reposting or allocation. These reports are intended for accounts. This report is based on evaluating project costs and revenues, providing capability to present data in a cost-element based display.	Standard Report – Cost Element Report

Report Name	Description	Standard Report/InfoCube
Project Hierarchy Reports	These reports are used primarily by the Project Managers (PM) because the reports are graphically structured just like the WBS structure of a project. These reports ignore 'internal business' which is to say they do not show the movement of cost via settlement. This is important because the PM needs to see how much has been charged to a WBS and is not concerned that the costs have actually settled to other receivers in monthly settlement. This report is based on using drill down reports for evaluating the costs, revenues, and payments of one or more projects. It provides capability to drill down on basis of various characteristics and to call up line items and documents.	Standard Report – Hierarchy Report
Percent Complete Reports	These reports will be able to monitor the % completions for projects.	Standard Report – Progress Report
Tracking Milestone Reports	These reports will be able to track the status of milestones within a project.	Standard Report – Structure Report
Forecasted Cash Needs	A report that identifies the forecast needs for each of the projects based on milestones, budgets, and amounts to date.	Custom Report

InfoCubes represent predefined sets of data that will be accessible for authorized users from the SCEIS Business Warehouse. The Infocubes contain information that is transferred from the production system into a repository on a predefined basis. The cubes are standard within the solution and will be reviewed by the project team to confirm applicability for the specific functional reporting needs as identified above. The following table describes the standard Controlling InfoCubes.

Exhibit 2.13.2-7 Project Systems InfoCube

InfoCube Name	Purpose/Description
Controlling	This InfoCube is titled Controlling (since Project Systems is a module within Controlling); however, it contains the transactional data relevant for project systems activities. This includes the master data, actual costs and budgeting information.

Workflow

If a data entry clerk has parked a document, the clerk can manually contact the appropriate supervisor for approval of the parked document or use the SCEIS solution workflow capability. Listed below are the benefits of utilizing workflow:

- A tool for increasing the efficiency of office communication and organization
- Allows automated document release (posting the document) and/or approval procedures involving two persons
- Increases efficiency of business processes by linking tasks to employees or departments within the organization
- Reduces time and cost in managing business processes by coordinating people, work steps and the data to be processed
- Increases transparency and quality

Through workflow, multiple approval processes can be configured. When a document is parked, it is triggered by threshold amounts for release to be approved. However, only three levels of amount approvals are possible. The amount-based release procedure will determine which person of responsibility should be notified (the approval path between employees or organizational departments must be configured), and the system will automatically place a message in the approver's mailbox to review the parked document. Upon review, the approver can complete (insert additional required information), approve or reject the parked document. If rejected, a mail message will be sent to the originator of the parked document. If completed, the parked document is ready to be posted (called "release" in workflow).

If certain information is not available during document creation, the document can be saved as a held document. As with a parked document, when a held document is saved, no financial accounting entries are posted. Holding a document differs from parking a document in the following ways:

- The User assigns a temporary document number to the held document, which is controlled by the User ID. Others cannot view or change this held document.
- Held documents cannot be viewed in account display. Held documents can only be displayed during standard document entry time using the Open Held Document push-button.

Imaging

Imaging within Project Systems (PS) refers to the scanning and capturing of information that is required to be maintained for the projects. The State can scan and attach documents to PS documents. Typically in PS it would include documents such as specifications for buildings, contracts, etc. In addition, if the State would want to do drawings there are special ways to attach CADD drawings. That is not part of a normal implementation but is sometimes used in the construction industry. The following table identifies the types of potential documents and information to be included in the imaging process and the point in the process to which the imaging activities would generally occur.

Exhibit 2.13.2-8 Project Systems Imaging Integration Points

Scanned Documentation	Approval Process	Imaging Integration Point
Request for Project Form	No	The document currently contains the agency's basis for the request. Approvals for this information will not be contained within the SCEIS solution in the short-term.
Part 1 and Part 11 documentation and specifications for State Project Approval	No	The documentation for approval may be attached to the project master record. However, master records will not be established unless they have been approved through the appropriate parties.
Documents such as drawings, plans, figures as project attachments	No	The documentation will be created and attached to the master record of the project.

User Roles

Based on the business processes supporting Project Systems, the following standard roles have been identified. Typical roles include project manager, financial accountant, and inquiry only. The project manager can create a project but cannot release it for charges. The financial accountant, on the other hand, can do basically everything to a project except by agreement they will not change the structure. The inquiry only is a reporting role that can print and display reports and master data.

Exhibit 2.13.2-9 Project Systems Standard User Roles

User Role	Description
Central Master Data Maintenance	Project setup and creation of master data after the project has been approved. This will be conducted centrally based on information distributed from the agencies relating to their approved projects.
Project Engineers/Managers	The project managers will be responsible for managing the completion percentages of the project. These responsibilities may occur within the agencies or by a central project engineering group.
Agency Project Accountant	The project accountant is responsible for managing the planning and budgetary amounts of the project within the SCEIS solution. The project budget will not allow the individual activities to be overspent (separate from the legal capital project plan budget). The project accountant will also be able to access financial reports and information on the project in a display only mode.